

REMARKS

Review and reconsideration of the application in view of

Applicants' amendments and remarks are respectfully requested. Applicants herein amend Claims 1 and 21, and such amendments are supported in the specification at least at page 4, lines 27-30, page 16, lines 1-5, and Figs. 2A, 3A, and 4A.

35 USC §102(b) over Sutton et al.

Claims 1, 8-12, and 16-19 are rejected under 35 USC §102(b) over Sutton et al. (US Patent 5,714,340). For at least the following reasons, Applicants traverse the rejection.

According to the Office Action, Sutton et al. discloses a method of detecting biological samples including providing a microarray having a substrate with no preselected sites for microsphere association, and coated with a composition comprising microspheres dispersed in a fluid containing a gelling agent, wherein the microspheres are immobilized at random positions on the substrate, and at least some microspheres contain an optical barcode and a biological probe. Applicants submit Sutton et al. does not teach, disclose or suggest the claimed invention as set forth in claim 1 and the claims dependent therefrom.

Sutton et al. does not teach, disclose or suggest a method of identifying biological samples wherein the microarray includes a population of micro-spheres dispersed in a fluid containing a gelling agent and immobilized at random positions with a uniform density on the substrate. Sutton et al. is directed to an immunoassay element for assaying ligands, wherein the element includes a layer containing a labeled ligand, a bead spreading layer, a cross-linked hydrophilic polymer layer including receptors, and a support. Neither the beads of the bead spreading layer nor the receptors of the cross-linked hydrophilic polymer layer can be compared to the micro-spheres of Applicants claimed composition.

The beads of the bead spreading layer of Sutton et al., as shown in Figure 1 of Sutton et al., form a stack comprising multiple layers of beads. In contrast, the claimed invention has a single layer of microspheres on a substrate, as shown in Figs. 2A, 3A, and 4A.

The receptors shown in Figures 3-5 and discussed at col. 10, lines 3-11, of Sutton et al., form clusters in a cross-linked hydrophilic polymer layer. In contrast, the claimed invention is directed to microspheres that are randomly dispersed with a uniform density on a substrate, as explained and exemplified in Example 4 at page 15, line 15, - page 17, line 4, of Applicants' specification. The clustered receptors of Sutton are not randomly dispersed with a uniform density, as claimed by Applicants.

Sutton et al. does not teach all the elements of the claimed invention. For example, Sutton et al. does not teach at least a microarray comprising microspheres in a single layer randomly dispersed with a uniform density on a substrate. For at least the above reasons, reconsideration and withdrawal of the rejection are in order and are respectfully requested.

35 USC §103(a) over Sutton et al.

Claims 2-4 and 13-15 are rejected under 35 USC §103(a) over Sutton et al. (US Patent 5,714,340) in view of Walt et al. (US Patent 6,327,410). Claims 5-7 and 2-22 are rejected under 35 USC §103(a) over Sutton et al. in view of Porter et al. (US Patent 6,146,899). Claim 20 is rejected under 35 USC §103(a) over Sutton et al. in view of Chang et al. (US Patent 4,873,35). Claims 23-25 are rejected under 35 USC §103(a) over Sutton et al. in view of Porter et al. as applied to Claim 21 above, and further in view of Walt et al. For at least the following reasons, Applicants traverse each of the above rejections.

As discussed above, Sutton et al. does not disclose or suggest the subject matter of the claimed invention as set forth in independent claims 1 and 21, and all claims dependent therefrom, because Sutton et al. does not disclose or suggest a microarray including a population of micro-spheres dispersed in a fluid containing a gelling agent and immobilized in a single layer at random positions with a uniform density on a substrate.

Walt et al. requires a substrate having discrete, individual sites for attachment of microspheres, and therefore teaches away from the claimed invention.

Porter et al. is directed to patterned immobilization of a target on a patterned surface for use as a height referencing biochemical cassette. Porter et al. requires the three-dimensional patterning in order to be effective in

determining bonding of target molecules. See, for example, page 2, lines 28-31; page 3, lines 4-6; and page 5, lines 18-50. Porter et al. does not disclose or suggest random immobilization on a substrate, and teaches away from such random immobilization.

Chang et al. is directed to the formation of magnetic particles. Chang et al. does not disclose or suggest a microarray, a method of making the same, or a method of identifying biological samples using a microarray.

None of the secondary references of Walt et al., Porter et al., Chang et al., or any combination thereof, overcome the deficiencies of Sutton et al. In particular, none of the references, taken alone or in any combination, disclose or suggest a microarray including a population of micro-spheres dispersed in a fluid containing a gelling agent and immobilized in a single layer at random positions with a uniform density on a substrate, as claimed by Applicants. Further, at least Sutton et al., Walt et al., and Porter et al. teach away from a single layer of randomly dispersed microspheres of uniform density. For at least the above reasons, reconsideration and withdrawal of each rejection under 35 USC §103(a) are in order and are respectfully requested.

Obviousness-type Double Patenting

Claims 21-25 are rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over Claims 21-25 of copending U.S. Application No. 10/098,642. Although Applicants contend the inventions are patentably distinct, in order to further prosecution, Applicants provide a terminal disclaimer in accordance with 37 CFR §1.321(c) to overcome the double patenting rejection. Reconsideration and withdrawal of the rejection are requested.

For at least the reasons set forth above, Applicants submit all of Claims 1-25 are in condition for allowance. Prompt and favorable action are respectfully requested.

Should the Examiner require anything further, or have any questions, the Examiner is asked to contact Applicants' undersigned representative.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Kathleen Neuner Manne', is written over a horizontal line.

Attorney for Applicant(s)
Registration No. 40,101

Kathleen Neuner Manne/cak
Rochester, NY 14650
Telephone: 585-722-9225
Facsimile: 585-477-1148

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.